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Applicant: **Shuo-Yen Robert Li**

Case: 11

Serial No. **09/881,827**

Filed: **June 15, 2001**

Group Art Unit:

Examiner:

Title of Invention: **A CONDITIONALLY NONBLOCING SWITCH OF THE
UPTURNED DECOMPRESSOR TYPE**

**THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231**

SIR:

Enclosed is a Preliminary Amendment in the above-identified application.

An additional fee is required based on the calculation below for a **small entity**:

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT	CLAIMS PREVIOUSLY PAID FOR	EXTRA	RATE	ADDITIONAL FEE
Total Claims	21	21	0	\$9.00	\$ 0.00
Indep. Claims	2	3	0	\$40.00	\$ 0.00

Multiple Claims First Presented with this Amendment = 0	\$0
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Total: \$0.00

Also enclosed herewith for filing in connection with the enclosed application are:

XX Return Postcard

Respectfully submitted,

John T. Peoples

Date: 9-8-01

John T. Peoples (Reg. No. 28,250)
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Certificate of Mailing Under 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited by me on
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9-8-01
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John T. Peoples
John T. Peoples



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THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

SIR:

PRELIMINARY AMENDMENT

Enclosed is a Preliminary Amendment in the above-identified application.
Please amend the application as follows.

In the Specification: —

Replace pages 8 and 9 with the following:

-- SUMMARY OF THE INVENTION

21
The shortcomings of the prior art, as well as other limitations and
deficiencies, are obviated in accordance with the present invention by applying algebraic
principles to the physical realization of a large switching fabric based upon contemporary
technologies.

In accordance with a broad method aspect of the present invention, a
method for implementing a class of $N \times N$ upturned decompressors each serving a

a/ connection request to route $m \leq N$, and for enabling the service of any connection request in a nonblocking way on the condition that the connection request is compliant to certain constraints, the method for each of the upturned decompressors includes: (a) configuring a switch defined by a set of connection states and having an array of N input ports with N distinct input addresses and an array of N output ports with N distinct output addresses wherein the m incoming signals arrive at m distinct input ports determining m active input addresses and are destined for corresponding m distinct output ports determining m active output addresses, and wherein said constraints on the connection request are that: (1) the m active input addresses are consecutive upon a rotation of the ordering of the N input addresses, and (2) the correspondence between the m active input addresses and the m active output addresses is order reversing after the rotation; and (b) routing the incoming signals from the m distinct input ports to the corresponding m distinct output ports by activating one of the connection states such that the activated one of the connection states accommodates the connection request subject to said constraints on the connection request.

In accordance with a broad system aspect of the present invention, a class of $N \times N$ upturned decompressors each serving a connection request to route m incoming signals, $m \leq N$, and for enabling the service of any connection request in a nonblocking way on the condition that the connection request is compliant to certain constraints, each of the upturned decompressors includes: (a) a switch defined by a set of connection states and having an array of N input ports with N distinct input addresses and an array of N output ports with N distinct output addresses wherein the m incoming signals arrive at m